

Amendments to the Specification

Please amend the paragraphs beginning on page 3, line 17 to page 4, line 23 as follows:

A liquid level detecting apparatus 1 of the present invention has a movable contact 2 to be displaced in accordance with the fluctuation of a liquid level, ~~fixed electrodes 5 slidingly contacted by the movable contact 2~~ a ~~slide 5 slidingly moved at the movable contact on a circuit board 4,~~ a first resistance 7 connected to ~~this slide~~ the fixed electrodes 5, and ~~[[a]] connecting portions 8a, 8b~~ portion 8 which terminals 9 contact, respectively ~~a terminal 9 contacts,~~ a resistance value of the first resistance 7 which varies when the movable contact 2 is slidingly moved on the ~~slide~~ fixed electrodes 5 being outputted from the ~~terminal~~ terminals 9 via the connecting portions 8a, 8b ~~portion 8~~, wherein at least the ~~section~~ sections of the connecting portions 8a, 8b ~~portion 8~~ which contact ~~contacts~~ the ~~terminal~~ terminals 9 are ~~[[is]]~~ covered with a second ~~resistance~~ resistances 16, respectively. Owing to such construction, the liquid level detecting apparatus 1 in which the ~~terminal~~ terminals 9 ~~[[is]]~~ are detachable and rarely influenced by silver sulfide can be provided.

Another liquid level detecting apparatus according to the invention is formed so that the resistance value of the second ~~resistance~~ resistances 16 ~~[[is]]~~ are set lower than that of the first resistance 7. Owing to this structure, the liquid level detecting apparatus 1 in which the ~~terminal~~ terminals 9 ~~[[is]]~~ are detachable and rarely influenced by silver sulfide can be provided.

Still another liquid level detecting apparatus according to the invention is formed so that the second ~~resistance~~ resistances 16 ~~contains~~ contain at least ruthenium oxide ( $\text{RuO}_2$ ) and has a sheet resistivity of not higher than  $1.0 \Omega/\text{mm}^2$ . Owing to such a structure, the liquid level detecting apparatus 1 in which the ~~terminal~~ terminals 9 ~~[[is]]~~ are detachable and rarely influenced by silver sulfide can be provided. Since the resistance value is set low, the tolerance of

resistance value occurring when the second ~~resistances are~~ ~~resistance is~~ formed can be minimized, and in its turn a detection error can be reduced to a low level.

Please amend the paragraphs beginning on page 5, lines 4-17 as follows:

A liquid level detecting apparatus 1 includes first and second movable contacts 2, 3 ~~to be~~ displaced in accordance with the fluctuation of a liquid level (not shown), ~~first~~ fixed electrodes 5 and ~~second slides 5,~~ fixed electrode 6 on which the first and second movable contacts 2, 3 provided on a circuit board 4 are slidingly moved, respectively, a first resistance 7 connected to the ~~first slide~~ fixed electrodes 5 provided also on the circuit board 4, and connecting portions 8a, 8b ~~[[8]]~~ also provided on the circuit board 4. Terminals 9 are in contact with these connecting portions 8a, 8b, respectively ~~[[8]]~~.

In the liquid level detecting apparatus 1, the first movable contact 2 is slidingly moved on the ~~first slide~~ fixed electrodes 5 to cause the resistance value of the first resistance 7 to vary, and outputs this resistance value from the terminals 9 via the connecting portions 8a, 8b ~~[[8]]~~ to meters and the like (not shown).

Please amend the paragraphs beginning on page 5, lines 22 to page 9, line 6 as follows:

This sliding member 10 is a plate type body made of a conductive metal, and adapted to turn around a rotary shaft provided on a frame and the like (not shown) constituting the liquid level detecting apparatus 1. The sliding member 10 is operatively connected to a float (not shown) via a member, for example, an arm and the like (not shown). The float stays on a level of a liquid fuel stored in the fuel tank, and the sliding member 10 turns in accordance with the fluctuation of the liquid level. The first and second movable contacts 2, 3 are turned with the

sliding member 10 around the above-mentioned rotary shaft, and slidingly moved on the ~~first and second slides 5, 6~~ fixed electrodes 5 and fixed electrode 6, respectively.

The ~~first slide 5 is~~ fixed electrodes 5 are formed by providing a plurality of linearly made fixed electrodes like teeth of a comb. In this embodiment, the ~~first slide~~ fixed electrodes 5 are ~~[[is]]~~ formed at the side of one end portion thereof substantially in the shape of a fan so that the ~~first slide~~ fixed electrodes 5 ~~[[is]]~~ are on a path along which the first movable contact 2 is slidingly moved. The ~~second slide~~ fixed electrode 6 in this embodiment is fan-shaped so that the ~~second slide~~ fixed electrode 6 is on a path along which the second movable contact 3 is slidingly moved.

The ~~first and second slides 5, 6~~ fixed electrodes 5 and fixed electrode 6 are formed out of the same conductive paste in the same step. The components of this conductive paste are 80 wt% of silver and palladium and 20 wt% of glass and oxide, such as bismuth oxide. When this conductive paste is provided on the circuit board 4 by screen printing and the like and baked at a suitable temperature, the ~~first and second slides 5, 6~~ fixed electrodes 5 and fixed electrode 6 are sintered. Glass and an oxide, such as bismuth oxide gather on the surface and its vicinity of the ~~first and second slides 5, 6~~ fixed electrodes 5 and fixed electrode 6 thus baked, and these ~~slides electrodes~~ have an excellent abrasion resistance. The ~~first and second slides 5, 6~~ fixed electrodes 5 and fixed electrode 6 having an excellent abrasion resistance can be obtained.

The first resistance 7 is formed out of a material containing ruthenium oxide, by providing a resistance paste on the circuit board 4 by screen printing and baking the resultant product at a suitable temperature. In this embodiment, the first resistance 7 is provided astride the plural linear fixed electrodes constituting the ~~first slide~~ fixed electrodes 5. The shape of the

first resistance 7 in this embodiment is rectangular. The shape of the first resistance 7 can be set arbitrarily taking a layout on the circuit board 4 into consideration.

Referring to Fig. 1, a reference numeral 11 denotes regulating resistances, which are formed in the same step as the first resistance 7. The regulating resistances 11 are connected to extensions of arbitrary fixed electrodes among the plural fixed electrodes forming the ~~first-slide~~ fixed electrodes 5, and provided in parallel with the first resistance 7. The resistance value of the first resistance 7 is regulated to an arbitrary characteristic value by changing the resistance values of the regulating resistances 11 by removed portions 12 obtained by removing parts of the regulating resistances 11 by laser trimming. Referring to Fig. 1, a reference numeral 13 denotes detecting lands which an inspection needle (not shown) of an apparatus for measuring the resistance value of the regulating resistance 11 contacts.

In this embodiment, two substantially square connecting portions 8a, 8b [[8]] are formed. The thickness of the film of the connecting portions 8a, 8b [[8]] is not smaller than 7.5  $\mu\text{m}$ . [[A]] The connecting portion 8a joined to the first resistance 7 is provided with a pattern 14 extending from the connecting portion 8a and joined to the first resistance 7. [[A]] The connecting portion 8b joined to the ~~second-slide~~ fixed electrode 6 is provided with a pattern 15 extending from the connecting portion 8b and joined to the ~~second-slide~~ fixed electrode 6. The connecting portions 8a, 8b [[8]] and extension patterns 14, 15 are also formed out of the same conductive paste as that of the mentioned ~~first and second slides 5, 6~~ the fixed electrodes 5 and fixed electrode 6 in the same step.

The outer surfaces of the connecting portions 8a, 8b excluding the extension patterns 14, 15 are covered with second resistances 16. Therefore, the connecting portions 8a, 8b enable the formation of silver sulfide to be held down, and the influence of the silver sulfide to be rarely

received. The material of which the second resistances 16 are made contains ruthenium oxide just as that of the first resistance 7.

In this embodiment, the resistance values of the second resistances 16 are lower than that of the first resistance 7. In this embodiment, the second resistances 16 contain at least ruthenium oxide ( $\text{RuO}_2$ ), and have sheet resistivity of not higher than  $1.0 \Omega/\text{mm}^2$ . When the resistance values of the second resistances 16 are thus set low, the fluctuation of the resistance values, i.e. the tolerance of the resistance values occurring due to the nonuniformity and the like of the second resistances 16 encountered in the formation thereof by printing can be minimized, thereby an influence on the resistance values to be outputted can be decreased and in its turn a detection error made by the liquid level detecting apparatus can be reduced to a low level.